

COMPUTERIZED INTERACTIVE METHOD AND SYSTEM FOR DETERMINING A  
RISK OF DEVELOPING A DISEASE AND THE CONSEQUENCES OF  
DEVELOPING THE DISEASE

FIELD OF THE INVENTION

The present invention relates to a method and a system for determining a risk of developing a disease and the consequences of having the disease, in particular, an interactive computerized method and system for determining the risk of developing coronary artery disease and the consequences of having the disease.

BACKGROUND INFORMATION

Coronary artery disease (CAD) is the leading cause of death for Americans today. Approximately twenty percent (20%) of all American deaths are due to CAD. It is estimated that sixteen (16) million Americans per year are treated for CAD, and one million of these will suffer a heart attack.

Risk factor modification (RFM) and preventive medicine are becoming a major trend as it relates to modifying an individual's risk of developing a disease. For example, RFM for CAD encompasses many aspects of daily life such as smoking cessation, obesity reduction, exercise, lipid management, dietary modification and supplementation, and taking an aspirin a day. Individuals have recognized the importance of a healthy lifestyle. Indeed, physicians are under increasing pressure from the government, medical specialty organizations, managed care and patients to practice preventive medicine. Moreover, managed care and insurance companies have recognized that RFM is a very cost effective strategy. Unfortunately studies show that little progress has been made in the area of RFM and preventive medicine -- especially with regard to cardiovascular health.

Practice guidelines have been developed and/or published by

the American College of Cardiology and American Heart Association, the U.S. Department of Health and Human Services Agency for Healthcare Policy and Research (AHCPR), and the National Heart, Lung and Blood Institute. These guidelines provide algorithms for risk assessment and modification. The practice guidelines, however, are cumbersome, difficult to use, and not readily accessible to or understood by patients. Thus, there is a need to bring RFM to the forefront and simplify the information provided in the practice guidelines.

The Internet and world wide web (WWW) have become major factors in providing healthcare information and resources. Web sites such as, WebMD.com, Medscape.com, Dr.Koop.com, Realage.com and cardassoc.com, provide both physicians and users with valuable healthcare information. These web sites can be categorized into one of four types:

1. Informational,
2. E-mail,
3. Questionnaire, and
4. Combinational.

Informational type web sites typically provide encyclopedia-like healthcare information. Informational web sites, however, are generally difficult to navigate because they provide an individual with huge amounts of information, which must be sifted through. E-mail type web sites allow a user to type in questions that are answered by physicians at a host site. The users, however, are only provided with cursory answers to their questions. Questionnaire type web sites typically ask the user a series of questions to assess the user's health. None of these web sites provide the user with contemporaneous feedback regarding risk factors for a particular disease based on the information that is provided by the user. Finally, none of these web sites track the user's progress as his or her health status improves or deteriorates. Thus, it would be useful to provide an interactive web site that allows a user to provide detailed information regarding a disease, determines an individual's

risk of developing the disease, determines the risks associated with the disease if the individual already has the disease, provides ways in which the individual can decrease his or her risk of developing the disease, and tracks the individual's progress with respect to modification of his or her risk factors.

#### SUMMARY OF THE INVENTION

The interactive computerized method and system according to the present invention determines an individual's risk of developing a disease, for example CAD, or the individual's risk associated with the disease if the individual already has the disease, and provides RFM information to the user. The method and system according to the present invention also tracks the individual's progress in modifying his or her risk factors. The computerized method and system is implemented via a computer operating either in a stand alone mode or in any conventional networking environment, such as the Internet, WWW or local area network (LAN). The computer accesses a program that implements the method according to the present invention. The program may be accessed by a user, for example, an individual providing his own information or another's information.

The program may be written in a conventional programming language, such as C++ or hypertext markup language. The program determines the individual's risk of developing the disease and provides ways for the individual to modify his or her risk.

The program implements several sections. One section determines the individual's risk for developing the disease. The user accesses this section of the program via a login routine. After logging in, the user is asked a series of questions regarding known risk factors for the disease, for example physical characteristics, lifestyle information and